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REC'D TN  
REGULATORY AUTHORITY  
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June 10, 2002

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OFFICE OF THE  
EXECUTIVE SECRETARY

VIA HAND DELIVERY

David Waddell, Executive Secretary  
Tennessee Regulatory Authority  
460 James Robertson Parkway  
Nashville, TN 37238

Re: *Petition of Cinergy Communications Company for Arbitration of an  
Interconnection Agreement with BellSouth Telecommunications, Inc.  
pursuant to the Telecommunications Act of 1996*  
Docket No. 01-00987

Dear Mr. Waddell:

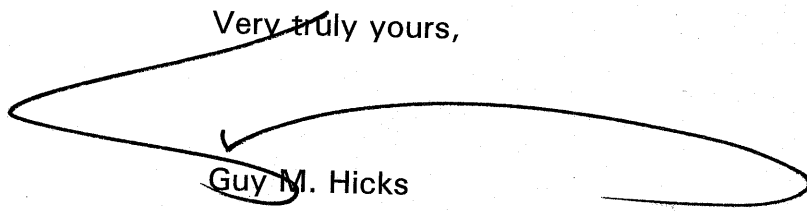
Enclosed are the original and thirteen copies of the following Direct  
Testimony on behalf of BellSouth:

Cynthia K. Cox  
Thomas G. Williams

Keith Milner

Copies of the enclosed are being provided to counsel of record.

Very truly yours,

  
Guy M. Hicks

GMH:ch

**CERTIFICATE OF SERVICE**

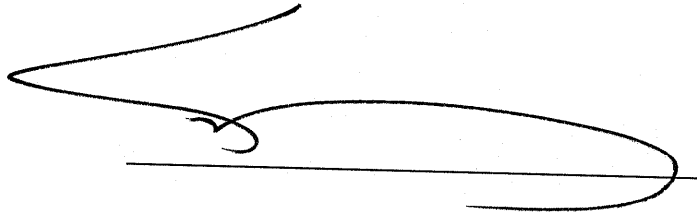
I hereby certify that on June 10, 2002, a copy of the foregoing document was served on the parties of record, via the method indicated:

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Henry Walker, Esquire  
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- ☒ Hand  
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Bob Bye, Esquire  
Cinergy Communications  
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Overland Park, KS 66214  
[bye@cinergycom.com](mailto:bye@cinergycom.com)

A handwritten signature in black ink, appearing to be 'Bob Bye', written over a horizontal line.

1                   BELLSOUTH TELECOMMUNICATIONS, INC.  
2                   DIRECT TESTIMONY OF CYNTHIA K. COX  
3               BEFORE THE TENNESSEE REGULATORY AUTHORITY  
4                   DOCKET NO. 01-00987  
5                   JUNE 10, 2002  
6

7    Q.    PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH  
8           TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR  
9           BUSINESS ADDRESS.

10  
11   A.    My name is Cynthia K. Cox. I am employed by BellSouth as Senior  
12           Director for State Regulatory for the nine-state BellSouth region. My  
13           business address is 675 West Peachtree Street, Atlanta, Georgia 30375.  
14

15   Q.    PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR  
16           BACKGROUND AND EXPERIENCE.  
17

18   A.    I graduated from the University of Cincinnati in 1981, with a Bachelor of  
19           Business Administration degree in Finance. I graduated from the Georgia  
20           Institute of Technology in 1984, with a Master of Science degree in  
21           Quantitative Economics. I immediately joined Southern Bell in the Rates  
22           and Tariffs organization with the responsibility for demand analysis. In  
23           1985, my responsibilities expanded to include administration of selected  
24           rates and tariffs including preparation of tariff filings. In 1989, I accepted  
25           an assignment in the North Carolina regulatory office where I was

1 BellSouth's primary liaison with the North Carolina Utilities Commission  
2 Staff and the Public Staff. In 1993, I accepted an assignment in the  
3 Governmental Affairs department in Washington D.C. While in this office,  
4 I worked with national organizations of state and local legislators, NARUC,  
5 the FCC and selected House delegations from the BellSouth region. In  
6 February 2000, I was appointed Senior Director of State Regulatory.  
7

8 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED  
9 TODAY?  
10

11 A. The purpose of my testimony is to present BellSouth's position on four of  
12 the remaining unresolved issues in the arbitration between BellSouth and  
13 Cinergy Communications Company ("Cinergy") and to explain why the  
14 Authority should rule in BellSouth's favor on these issues. Cinergy  
15 requested negotiations regarding an interconnection agreement with  
16 BellSouth on May 30, 2001. BellSouth and Cinergy negotiated in good  
17 faith and resolved the vast majority of the issues raised during the  
18 negotiations. Cinergy raised 32 issues in its Petition for Arbitration (the  
19 "Petition") filed with the Tennessee Regulatory Authority ("Authority") on  
20 November 9, 2001. The parties have continued to negotiate. At the time of  
21 BellSouth's Response, filed December 4, 2001, 17 issues were unresolved.  
22 At this time, the only remaining issues are Issues 10, 11, 12, 13, and 14.  
23 My testimony addresses BellSouth's policy regarding Issues 10, 11, 13, and  
24 14. BellSouth witness Keith Milner addresses technical aspects of Issues  
25 10, 11 and 13. BellSouth witness Tommy Williams addresses Issue 12.

1

2 ***Issue 10: Should BellSouth be required to provide Cinergy Communications***  
3 ***nondiscriminatory access to unbundled packet switching in areas where***  
4 ***BellSouth has deployed remote terminals in its network?***

5 ***Issue 11: Should BellSouth be required to offer unbundled packet switching as a***  
6 ***UNE?***

7 ***Issue 13: Should BellSouth be required to include packet switching functionality***  
8 ***as part of the UNE platform (referred to as UNE-D)?***

9

10 Q. WHAT IS BELLSOUTH'S POSITION ON THESE ISSUES?

11

12 A. The Authority should not require BellSouth to provide packet switching as  
13 an unbundled network element ("UNE"), except in the limited circumstance  
14 set forth in FCC Rule 51.319(c)(5). The FCC addressed this issue in its  
15 *UNE Remand Order*<sup>1</sup> and concluded that incumbent local exchange carriers  
16 ("ILECs") are not required to unbundle packet switching, outside of "one  
17 limited exception." While a State commission may create additional UNEs  
18 beyond the FCC's national list, in order to do so it must find that a CLEC is  
19 impaired in its ability to offer services without access to the network  
20 function on an unbundled basis. As explained below and in the testimony  
21 of Mr. Milner, CLECs, including Cinergy, are not impaired in their ability  
22 to offer competitive services without unbundled packet switching. Also,  
23 the FCC is currently examining in several proceedings (described later in

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<sup>1</sup> *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking*, CC Docket No. 96-98, Released November 5, 1999 (*UNE Remand Order*).

1 my testimony) the issues surrounding the provision of packet switching, and  
2 the Authority should not issue a ruling that may be inconsistent with the  
3 policy being developed by the FCC based on extensive records in several  
4 dockets.

5  
6 Q. WHAT IS THE CURRENT FCC RULE REGARDING UNBUNDLING  
7 OF PACKET SWITCHING?

8  
9 A. In its *UNE Remand Order*, the FCC expressly declined “to unbundle  
10 specific packet switching technologies incumbent LECs may have deployed  
11 in their networks.”<sup>2</sup> The FCC concluded that, except in “one limited  
12 exception,” which I will discuss below, CLECs are not impaired without  
13 access to unbundled packet switching.<sup>3</sup>

14  
15 Q. PLEASE EXPLAIN THE “LIMITED EXCEPTION” TO WHICH YOU  
16 EARLIER REFERRED.

17  
18 A. The FCC’s Rule 51.319(c)(5) requires that an ILEC provide unbundled  
19 packet switching only where all of the following conditions are satisfied:  
20 (i) The incumbent LEC has deployed digital loop carrier systems,  
21 including but not limited to, integrated digital loop carrier or  
22 universal digital loop carrier systems; or has deployed any other  
23 system in which fiber optic facilities replace copper facilities in the

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<sup>2</sup>*UNE Remand Order*, ¶311.

<sup>3</sup>*Id.*, ¶313.

- 1 distribution<sup>4</sup> section (e.g., end office to remote terminal, pedestal or  
2 environmentally controlled vault);
- 3 (ii) There are no spare copper loops capable of supporting xDSL  
4 services the requesting carrier seeks to offer;
- 5 (iii) The incumbent LEC has not permitted a requesting carrier to deploy  
6 a Digital Subscriber Line Access Multiplexer in the remote terminal,  
7 pedestal or environmentally controlled vault or other interconnection  
8 point, nor has the requesting carrier obtained a virtual collocation  
9 arrangement at these subloop interconnection points as defined  
10 under §51.319(b); and
- 11 (iv) The incumbent LEC has deployed packet switching capability for its  
12 own use.

13 This exception is not at issue here. Rather, Cinergy is requesting that the  
14 Authority unbundle packet switching generally, far beyond what is  
15 contemplated by the FCC.

16

17 Q. WHEN THE FCC DECIDED NOT TO REQUIRE ILECS TO  
18 UNBUNDLE THE PACKET SWITCHING FUNCTIONALITY, DID IT  
19 CONSIDER THE EFFECTS THAT DECISION MAY HAVE ON  
20 COMPETITION IN THE ADVANCED SERVICES MARKET?

21

22 A. Yes. Throughout the *UNE Remand Order*, the FCC demonstrated an acute  
23 awareness of and concern for the deployment of advanced services. The  
24 FCC supported its decision to unbundle dark fiber, for instance, by noting,

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<sup>4</sup> The Rule uses the term “distribution”, but then defines distribution using the definition of “feeder”.

1 “unbundling of dark fiber is essential for competition in the provision of  
2 advanced services.” *Id.* at ¶196. The FCC also noted that “access to the  
3 subloop will facilitate rapid development of competition, encourage  
4 facilities-based competition, and promote the deployment of advanced  
5 services,” *Id.* at ¶207, and it clarified that incumbents are required to  
6 “provide loops with all their capabilities intact, that is, to provide  
7 conditioned loops, wherever a competitor requests, even if the incumbent is  
8 not itself offering xDSL to the end-user customer on that loop.” *Id.* at  
9 ¶191. It is clear, therefore, that the FCC was interested in establishing  
10 UNEs in a manner that allows CLECs to offer advanced services.  
11

12 It is equally clear, however, that the FCC recognized that CLECs can  
13 provide their own xDSL services without having unbundled access to  
14 BellSouth’s packet switching functionality. In Paragraph 190, for instance,  
15 the FCC stated that:

16 *Unbundling basic loops, with their full capacity preserved,*  
17 *allows competitors to provide xDSL services.*

18 \* \* \*

19 *Without access to these loops, competitors would be at a*  
20 *significant disadvantage, and the incumbent LEC, rather*  
21 *than the marketplace, would dictate the pace of the*  
22 *deployment of advanced services.*

23 The FCC further stated that “[a]ccess to unbundled loops will also  
24 encourage competition to provide broadband services.” *Id.* at ¶200. Thus,  
25 with one exception, the FCC determined that “the loop includes attached  
26 electronics, including multiplexing equipment used to derive the loop  
27 transmission capacity.” *Id.* at ¶175. Significantly, the one exception to this  
28 rule is that the loop does not include the DSLAM. *Id.* The FCC stated, “we



1 include the attached electronics (with the exception of DSLAMs) within the  
2 loop definition. By contrast, as we discuss below, we find that the DSLAM  
3 is a component of the packet switch network element.” *Id.* As I noted  
4 above, the FCC then declined to require incumbents to unbundle the packet  
5 switch network element, which includes the DSLAM.  
6

7 Q. DID THE FCC EXPRESS ANY CONCERNS REGARDING THE  
8 IMPACT THAT A REQUIREMENT TO UNBUNDLE PACKET  
9 SWITCHING FUNCTIONALITY MAY HAVE ON THE  
10 DEVELOPMENT OF COMPETITION IN THE ADVANCED SERVICES  
11 MARKET?  
12

13 A. Yes. In deciding not to require ILECs to unbundle the packet switching  
14 functionality, the FCC acknowledged that the advanced services market is  
15 competitive, and it recognized that forcing ILECs to unbundle equipment  
16 used to provide competitive advanced services would only impede the  
17 further development of competition:  
18

19 *[W]e are mindful that regulatory action should not alter*  
20 *the successful deployment of advanced services that has*  
21 *occurred to date. Our decision to decline to unbundle*  
22 *packet switching therefore reflects our concern that we not*  
23 *stifle burgeoning competition in the advanced service*  
24 *market. We are mindful that, in such a dynamic and*  
25 *evolving market, regulatory restraint on our part may be*  
26 *the most prudent course of action in order to further the*  
27 *Act’s goal of encouraging facilities-based investment and*  
28 *innovation.*

29 (*Id.* ¶316.) (emphasis added.)  
30

1 Q. DOES BELLSOUTH OFFER UNES THAT ALLOW CINERGY TO  
2 PROVIDE ITS OWN XDSL SERVICE IN TENNESSEE?

3  
4 A. Yes. BellSouth offers UNEs that allow Cinergy to transport data from a  
5 packet switch to a Digital Subscriber Line Access Multiplexer ("DSLAM")  
6 Cinergy collocates at a BellSouth remote terminal, and BellSouth provides  
7 UNEs that allow Cinergy to transport data from that DSLAM to its end  
8 user's premises. BellSouth, therefore, offers Cinergy all the UNEs  
9 necessary to provide its own xDSL service in Tennessee.

10  
11 Q. HAS CINERGY MET THE IMPAIRMENT STANDARD?

12  
13 A. No. In its *UNE Remand Order*, the FCC established the "impair" standard  
14 to determine if a network element should be unbundled. The FCC  
15 concluded that:

16  
17 *[T]he failure to provide access to a network element would 'impair'*  
18 *the ability of a requesting carrier to provide the services it seeks to*  
19 *offer if, taking into consideration the availability of alternative*  
20 *elements outside the incumbent's network, including self-*  
21 *provisioning by a requesting carrier or acquiring an alternative*  
22 *from a third-party supplier, lack of access to that element materially*  
23 *diminishes a requesting carrier's ability to provide the services it*  
24 *seeks to offer.*

25  
26 *Id.*, at ¶51.

27  
28 The FCC went on to say that a materiality component "requires that there be  
29 substantive differences between the alternative outside the incumbent LEC's  
30 network and the incumbent LEC's network element that, collectively,

1       ‘impair’ a competitive LEC’s ability to provide service within the meaning  
2       of section 251(d)(2).” *Id.* In order for a state commission to require the  
3       unbundling of packet switching, a CLEC must prove that it is impaired by  
4       not having access to BellSouth’s packet switching functionality on an  
5       unbundled basis. (See FCC Rule 51.319(b))  
6

7       As I mentioned earlier, and as Mr. Milner explains in his testimony,  
8       BellSouth offers UNEs to Cinergy that allow Cinergy to transport its data  
9       signals from its packet switches - or from a packet switch of another entity -  
10      to the remote terminal and from the remote terminal to the customer  
11      premises. Thus, even if Cinergy does not have its own packet switch, it is  
12      still not impaired because it can route its DSLAM to another entity’s packet  
13      switch. Cinergy is not impaired by the fact that neither the packet switching  
14      functionality nor the DSLAM is available as a UNE because as Mr.  
15      Milner’s testimony demonstrates Cinergy can purchase, install, and utilize  
16      these elements just as easily and just as cost-effectively as BellSouth. It can  
17      then use this equipment in combination with either its own facilities,  
18      facilities it obtains from a third party, or UNEs it obtains from BellSouth to  
19      provide its own xDSL service to its customers.  
20

21    Q.     IS A TWO-PARTY ARBITRATION THE APPROPRIATE  
22            PROCEEDING IN WHICH TO ADDRESS WHETHER BELL SOUTH  
23            MUST UNBUNDLE PACKET SWITCHING FUNCTIONALITY?  
24

1 A. No. The Authority should address issues regarding any establishment of a  
2 new UNE in a generic proceeding, not in a two-party arbitration. Should  
3 the Authority order BellSouth to unbundle packet switching as a result of  
4 this arbitration, its availability could ultimately not be limited to Cinergy as  
5 a result of "pick and choose" requirements. In other words, any CLEC could  
6 seek access to unbundled packet switching, regardless of whether or not it  
7 would be impaired without such access.

8  
9 Q. HAS THE AUTHORITY ADDRESSED THE ISSUE OF UNBUNDLING  
10 PACKET SWITCHING?

11  
12 A. Yes. This issue was addressed in the Intermedia Arbitration case, Docket  
13 No. 99-00948. The Authority's Order dated June 25, 2001, concludes, "the  
14 Arbitrators voted unanimously to require BellSouth to provide access to  
15 packet switching capabilities as an unbundled network element only when  
16 the limited circumstances identified in FCC Rule 51.319(c)(5)(i)-(iv) exist."  
17  
18 More recently, at the Directors' Conference on May 21, 2002, the Directors  
19 declined to include the issue of unbundling packet switching in Docket 00-  
20 00544, Generic UNE Docket for Line Sharing and Riser Cable and  
21 Terminating Wire. COVAD had filed a Petition in which it asked the  
22 Authority to "extend the portion of its Order addressing the installation of  
23 dual purpose line cards in NGDLC terminals to include the installation of  
24 equivalent technology in BellSouth's remote DSLAMs." This request, if  
25 granted, would result in unbundled packet switching. The transcript of the

1 May 21, 2002 Directors' Conference states (at p. 12) that the Directors  
2 voted "not to grant COVAD the relief it seeks in this issue, and it should not  
3 be addressed at this time."

4  
5 Q. SHOULD THE AUTHORITY REQUIRE INCUMBENT LECs TO  
6 UNBUNDLE SPECIFIC NETWORK ELEMENTS USED TO PROVIDE  
7 PACKET SWITCHING?

8  
9 A. No. CLECs are not impaired without access to BellSouth's unbundled  
10 packet switching.

11  
12 Q. ARE THERE ISSUES IN ADDITION TO IMPAIRMENT WHICH THE  
13 AUTHORITY NEEDS TO CONSIDER?

14  
15 A. Yes. The Authority must analyze the effects unbundling will have on  
16 investment and innovation in advanced services. CLECs will not have any  
17 incentive to invest in equipment to provide advanced services if they can  
18 ride the backs of, and shift investment risks to, the ILECs. Conversely, an  
19 ILEC's incentive to invest in new and innovative equipment will be stifled  
20 if its competitors, who can just as easily invest in the equipment, can take  
21 advantage of the equipment's use without incurring any of the risk.

22 AT&T's Chairman & CEO, C. Michael Armstrong, made exactly this point  
23 in a speech, entitled *Telecom and Cable TV: Shared Prospects of the*  
24 *Communications Future*, which he delivered to the Washington  
25 Metropolitan Cable Club in November of 1998. He said:  
26

1                   *No company would invest billions of dollars . . . if*  
2                   *competitors which have not invested a penny of capital*  
3                   *nor taken an ounce of risk can come along and get a free*  
4                   *ride in the investments and risks of others.*  
5

6           Mr. Armstrong is right on that point. And that is exactly why it would be  
7           manifestly unjust for the Authority to require BellSouth to unbundle its  
8           remote DSLAMs and provide Cinergy with access to packet switching on  
9           an unbundled basis. BellSouth took the risk to deploy this infrastructure at  
10          a time when the same opportunity was available to CLECs.  
11

12   Q.     IN WHAT PROCEEDINGS IS THE FCC CURRENTLY ADDRESSING  
13           THE POTENTIAL UNBUNDLING OF PACKET SWITCHING AND  
14           RELATED ISSUES?  
15

16   A.     In the *Third Further Notice of Proposed Rulemaking* in CC Docket No. 98-  
17           147 and *Sixth Further Notice of Proposed Rulemaking* in CC Docket No.  
18           96-98 (“Advanced Services FNPRM”)<sup>5</sup>, the FCC asked for and  
19           subsequently received comments on its decision not to require the  
20           unbundling of packet switching. In the same proceeding, the FCC asked for  
21           and received comments on whether to require ILECs to unbundle the  
22           equipment used in the provision of advanced services. In addition, in the  
23           NPRM in its *Triennial UNE Review*,<sup>6</sup> at ¶61, the FCC states:

24                               *The Commission required incumbent LECs, in limited*  
25                               *circumstances, to provide access to “packet switching*  
26                               *capability.” We seek comment on whether, in light of*  
27                               *changed circumstances, we should retain this unbundling*  
28

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<sup>5</sup> FCC Order No. 01-26, dated January 19, 2001.

<sup>6</sup> Notice of Proposed Rulemaking, *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Dockets 01-338, 96-98, 98-147, released December 20, 2001 (“*Triennial UNE Review*”).

1                    *requirement and, if so, whether we should modify this*  
2                    *requirement or the existing definition for this network*  
3                    *element.*

4  
5                    Also, on December 20, 2001, the FCC initiated a proceeding to examine the  
6                    regulatory treatment of incumbent carriers' broadband services (*Incumbent*  
7                    *LEC Broadband Notice*).<sup>7</sup> Both the *Triennial UNE Review* and the  
8                    *Incumbent LEC Broadband Notice* investigate how Title II regulation  
9                    applies to broadband service provided as telecommunications services and  
10                    whether facilities that can be used to provide broadband services should be  
11                    subject to Title II unbundling obligations. Finally, on February 15, 2002,  
12                    the FCC released a Notice of Proposed Rulemaking in a new docket to  
13                    address the fundamental definitional and classification questions for  
14                    wireline broadband Internet access services (*Broadband Framework*  
15                    *NPRM*).<sup>8</sup> In the *Broadband Framework NPRM*, at ¶16, the FCC stated:

16  
17                    *We tentatively conclude that wireline broadband Internet*  
18                    *access services – whether provided over a third party's*  
19                    *facilities or self-provisioned facilities – are information*  
20                    *services subject to regulation under Title I of the Act.*

21                    In other words, if broadband high speed Internet access, including DSL,  
22                    provided by telephone companies is information services rather than  
23                    telecommunications services, such services would not be governed by the  
24                    same regulations as basic telephone service.

25  

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<sup>7</sup> Notice of Proposed Rulemaking, *In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, CC No. 01-337, Released December 20, 2001. ("*Incumbent LEC Broadband Notice*")

<sup>8</sup> Notice of Proposed Rulemaking, *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket No. 02-33, (*Broadband Framework NPRM*).

1 Q. WHAT SIGNIFICANCE DO THESE FCC PROCEEDINGS HAVE TO  
2 THE ARBITRATION BETWEEN BELL SOUTH AND CINERGY?

3

4 A. In light of these pending proceedings before the FCC, there is no reason for  
5 the Authority to either order the unbundling of packet switching and/or to  
6 create a new UNE combination. The benefits of a national UNE list as  
7 outlined by the FCC in the *UNE Remand Order* are that it: (1) allows  
8 requesting carriers, including small entities, to take advantage of economies  
9 of scale, (2) provides financial markets with greater certainty in assessing  
10 business plans of new carriers, (3) facilitates states' abilities to conduct  
11 arbitrations, and (4) reduces the likelihood of litigation on Section 251  
12 requirements. There is no legitimate reason for the Authority to change its  
13 policy on packet switching that it has previously established.

14

15 Q. HAVE OTHER COMMISSIONS IN BELL SOUTH'S TERRITORY  
16 ORDERED BELL SOUTH TO PROVIDE PACKET SWITCHING AS A  
17 UNE?

18

19 A. No. Although this same issue has been considered by various state  
20 commissions in BellSouth's nine-state region, no state commission has  
21 ordered the unbundling of packet switching.

22

23 Q. ARE THERE INSTANCES IN WHICH A CLEC'S VOICE CUSTOMER  
24 CAN CONTINUE TO RECEIVE BELL SOUTH'S DSL SERVICE?

25



1     A.     Yes. Where a CLEC resells BellSouth voice service to an end user who  
2             already subscribes to BellSouth® FastAccess® Internet access service  
3             ("FastAccess") or to an ISP who uses BLS's wholesale DSL service,  
4             BellSouth will continue to provide the retail FastAccess service and the  
5             wholesale interstate DSL transport service. Unlike the situation with UNE-  
6             P, a CLEC reselling BellSouth's service does not have control of the loop.  
7             Specifically, the CLEC does not have access to the high frequency portion  
8             of the loop, which is required to provide DSL services. BellSouth retains  
9             access to the high frequency portion of the loop and, therefore, can continue  
10            to provide BellSouth's DSL service.

11

12

13    Q.     WHAT DOES BELLSOUTH REQUEST OF THE AUTHORITY?

14

15    A.     BellSouth requests that the Authority rule, consistent with the FCC, that  
16             BellSouth is not required to provide packet switching capabilities to  
17             Cinergy on an unbundled basis unless all four of the conditions in Rule  
18             51.319(c)(5) are met. The fact that the FCC is currently addressing packet  
19             switching requirements in its *Advanced Services FNPRM*, its *Triennial UNE*  
20             *Review*, its *Incumbent LEC Broadband Notice* and its *Broadband*  
21             *Framework NPRM* proceedings further supports BellSouth's position that  
22             the Authority should not impose any novel requirements in this area.

23

1    ***Issue 14: Should BellSouth be prohibited from requiring credit card billing of its***  
2    ***Advanced Service customers when Cinergy Communications provides the***  
3    ***underlying voice service to the same end user?***

4

5    Q.    WHAT IS BELL SOUTH'S POSITION ON THIS ISSUE?

6

7    A.    BellSouth should not be prohibited from requiring credit card billing of its  
8           Advanced Service customers who are customers of Cinergy for the  
9           underlying voice service.

10

11   Q.    PLEASE EXPLAIN BELL SOUTH'S POSITION.

12

13   A.    As set forth above, when a CLEC becomes the voice provider to a former  
14           BellSouth voice customer, BellSouth will no longer provide advanced  
15           services to that end user for the reasons previously described. However, if a  
16           CLEC provides voice service to an end user by reselling BellSouth's voice  
17           service, BellSouth will continue to provide its interstate tariffed ADSL  
18           service because the issues present when the CLEC provides voice service by  
19           leasing a UNE loop from BellSouth are not present in the resale situation.  
20           The tariffed wholesale ADSL service is sold to network service providers  
21           (NSPs), and the NSPs, including BellSouth through its unregulated,  
22           enhanced service, BellSouth FastAccess, sell to end users who concurrently  
23           subscribe to local exchange telecommunications service from a CLEC that  
24           provides service over resold lines. In such instances, BellSouth's billing

1 systems are only capable of billing the FastAccess service via the end user's  
2 credit card.

3

4 Q. WHY DOES BELL SOUTH REQUIRE THAT THE ADSL SERVICE IN  
5 SUCH RESALE CIRCUMSTANCES BE CREDIT CARD BILLED?

6

7 A. BellSouth's billing system for FastAccess provides for billing to the  
8 customer on either the customer's local telephone service bill or via credit  
9 card. When BellSouth is no longer the voice provider, and no longer  
10 issuing an end-user bill, the FastAccess service must be billed directly to the  
11 end-user via credit card. BellSouth does not have in place a system to allow  
12 it to send separate bills for retail FastAccess service when the customer is  
13 not also a voice customer of BellSouth. It is common practice in the  
14 industry for internet service providers to use credit card billing. Further,  
15 there is no reason to require BellSouth to incur the costs of modifying its  
16 billing system to do what other providers of enhanced services are not  
17 required to do.

18

19 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

20

21 A. Yes.

22

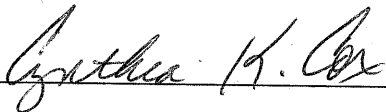
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AFFIDAVIT

STATE OF: Georgia  
COUNTY OF: Fulton

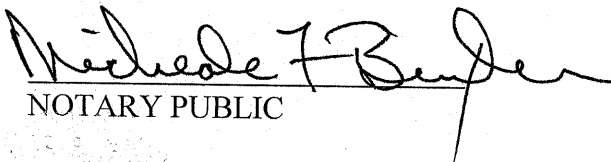
BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Cynthia K. Cox – Senior Director – State Regulatory, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

She is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 01-00987 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 17 pages and 0 exhibit(s).



Cynthia K. Cox

Sworn to and subscribed  
before me on June 10, 2002

  
NOTARY PUBLIC

MICHEALE F. BIXLER  
Notary Public, Douglas County, Georgia  
My Commission Expires November 3, 2005

1 BELL SOUTH TELECOMMUNICATIONS, INC.  
2 DIRECT TESTIMONY OF W. KEITH MILNER  
3 BEFORE THE TENNESSEE REGULATORY AUTHORITY  
4 DOCKET NO. 01-00987  
5 JUNE 10, 2002  
6

7 Q. PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS, AND  
8 YOUR POSITION WITH BELL SOUTH TELECOMMUNICATIONS,  
9 INC. ("BELL SOUTH").  
10

11 A. My name is W. Keith Milner. My business address is 675 West  
12 Peachtree Street, Atlanta, Georgia 30375. I am Assistant Vice  
13 President - Interconnection Operations for BellSouth. I have served in  
14 my present role since February 1996.  
15

16 Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.  
17

18 A. My business career spans over 32 years and includes responsibilities  
19 in the areas of network planning, engineering, training, administration,  
20 and operations. I have held positions of responsibility with a local  
21 exchange telephone company, a long distance company, and a  
22 research and development laboratory. I have extensive experience in  
23 all phases of telecommunications network planning, deployment, and  
24 operations in both the domestic and international arenas.  
25

1 I graduated from Fayetteville Technical Institute in Fayetteville, North  
2 Carolina in 1970, with an Associate of Applied Science in Business  
3 Administration degree. I obtained a Master of Business Administration  
4 degree from Georgia State University in 1992.

5

6 Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC  
7 SERVICE COMMISSION? IF SO, BRIEFLY DESCRIBE THE  
8 SUBJECT OF YOUR TESTIMONY.

9

10 A. Yes. I testified before the state Public Service Commissions in  
11 Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, South  
12 Carolina, the Tennessee Regulatory Authority, and the Utilities  
13 Commission in North Carolina on the issues of technical capabilities of  
14 the switching and facilities network regarding the introduction of new  
15 service offerings, expanded calling areas, unbundling, and network  
16 interconnection.

17

18 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED  
19 TODAY?

20

21 A. In my testimony, I will address the technical aspects of network related  
22 issues, which have been raised in the Petition for Arbitration filed by  
23 Cinergy Communications Company ("Cinergy") in this docket. Those  
24 are, in whole or in part, Issues 10, 11 and 13.

25

1   **Issue 10: Should BellSouth be required to provide Cinergy**  
2   **Communications nondiscriminatory access to unbundled packet**  
3   **switching in areas where BellSouth has deployed remote terminals in its**  
4   **network?**

5  
6   **Issue 11: Should BellSouth be required to offer unbundled packet**  
7   **switching as a UNE?**

8  
9   **Issue 13: Should BellSouth be required to include packet switching**  
10   **functionality as part of the UNE platform (referred to as UNE-D)?**

11  
12   Q.    WHAT IS BELL SOUTH'S POSITION ON THESE ISSUES?

13  
14   A.    The FCC has already determined that BellSouth is not required to  
15    provide unbundled packet switching as an Unbundled Network  
16    Element ("UNE") except in one limited circumstance. FCC Rule  
17    51.319(c)(5) requires BellSouth to provide packet switching as a UNE  
18    only if the following four conditions are met: 1) BellSouth has deployed  
19    digital loop carrier systems or any other system in which fiber facilities  
20    replace copper in the distribution section of the network, 2) there are  
21    no spare copper loops capable of supporting xDSL services the  
22    requesting carrier seeks to offer, 3) BellSouth has not permitted a  
23    requesting carrier to collocate a Digital Subscriber Line Access  
24    Multiplexer ("DSLAM") in the remote terminal, and 4) BellSouth has  
25    deployed packet switching capability for its own use. That limited

1 situation is not the issue in this arbitration.

2

3 Q. WHAT IS PACKET SWITCHING?

4

5 A. Packet switching is the generic term for a data communications  
6 offering, based on the packet service specified by the International  
7 Telecommunications Union ("ITU") ITU-T 12 X.25 access protocol.  
8 This protocol is described in Telcordia's GR-301-CORE, *Public Packet*  
9 *Switched Network Generic Requirements (PPSNGR)*. This document  
10 describes aspects of this service and associated network equipment  
11 that is commonly used to provide it. Service names and feature details  
12 may vary among service providers. BellSouth uses the form of packet  
13 switching referred to as Asynchronous Transfer Mode ("ATM"). Thus,  
14 in the context of my testimony, packet switching is a reference to ATM.

15

16 Q. PLEASE GENERALLY DESCRIBE ATM SWITCHING.

17

18 A. ATM is a cell-oriented switching and multiplexing technology that uses  
19 fixed length packets to carry different types of traffic. Simply, with  
20 ATM, individual packets are switched over shared circuits as  
21 compared to traditional circuit switching where individual paths  
22 (circuits) are connected and disconnected on behalf of individual  
23 users. ATM uses fixed size data units or "cells" in the transfer of  
24 information from the source to the destination. The ATM layer of the  
25 protocol defines the cell structure and how ATM cells flow through the



1 logical connections (rather than physical connections) in a network. A  
2 cell consists of an information field (sometimes referred to as the cell  
3 "payload") that is transported along with a header. The header  
4 information can be thought of as the address and return address  
5 information found on an envelope being mailed. The information field  
6 (that is, the "payload") may be thought of as the actual contents  
7 (pages) inside the envelope being mailed.

8  
9 The term "asynchronous" refers to the fact that cells being transmitted  
10 may exhibit an irregular recurrence pattern. The term "bursty" is  
11 sometimes used to describe the irregular pattern. Each ATM cell  
12 header sent into the network contains address information that is used  
13 to establish a Virtual Connection ("VC"). A Virtual Path ("VP") is a  
14 bundle or collection of VC's made through an ATM network.

15  
16 Q. CINERGY ASKS THE AUTHORITY TO ORDER BELLSOUTH TO  
17 PROVIDE A PACKET SWITCHING UNE. ADDITIONALLY, CINERGY  
18 APPARENTLY BELIEVES THAT BECAUSE BELLSOUTH  
19 CURRENTLY PROVIDES ASYMMETRICAL DIGITAL SUBSCRIBER  
20 LINE ("ADSL") SERVICE, THERE ARE NO TECHNICAL  
21 LIMITATIONS THAT WOULD PREVENT THE IMMEDIATE  
22 IMPLEMENTATION OF UNBUNDLED PACKET SWITCHING AS  
23 SOON AS THE AUTHORITY ORDERS IT. PLEASE COMMENT.

24  
25 A. First, let me say that the FCC's rules do not require BellSouth to

1 provide its packet switching network on an unbundled basis except in  
2 the one limited situation set forth in the rule cited above. Such  
3 situations do not at present exist in Tennessee. Further, Cinergy's  
4 claims are somewhat inaccurate and misleading. They grossly  
5 oversimplify what would be involved in the effort to unbundle  
6 BellSouth's packet switched network. Let me explain.

7  
8 BellSouth's packet switched network was designed and established  
9 based on the assumption that only BellSouth would use it. For  
10 BellSouth to take an existing solution with the hundreds of related sub-  
11 systems, designed for BellSouth's own use, and convert this into a  
12 system capable of providing that same solution to outside third parties,  
13 would be an extensive undertaking in terms of both time and money.  
14 BellSouth developed its wholesale ADSL service solely for use by  
15 BellSouth's voice service customers. Consequently, when BellSouth  
16 developed the provisioning flows, methods, procedures and the like,  
17 the assumption was made that all customers of ADSL solutions would  
18 be BellSouth voice customers. Therefore, the most efficient driver for  
19 the system flows and necessary record keeping is the associated  
20 telephone number. If BellSouth were required to provide its ADSL  
21 solution to Competitive Local Exchange Carriers' ("CLECs") end  
22 users, which are without BellSouth telephone numbers, the  
23 provisioning systems (and also the ordering, billing, repair, and  
24 maintenance, etc. systems) would have to be revamped. The CLEC  
25 would now become the voice provider, and accordingly there no longer

1 is a working BellSouth telephone number, but rather, a CLEC  
2 telephone number that is not recognized by BellSouth's ADSL loop  
3 qualification and provisioning systems. Accordingly, very extensive,  
4 expensive, and time consuming "re-writes" would be needed to all the  
5 systems and sub-systems. To take a very large, complex and detailed  
6 internal system designed to use BellSouth telephone numbers and  
7 convert it to use CLEC's telephone numbers would require extensive,  
8 expensive and time consuming "re-writes" to all of the systems and  
9 related sub-systems.

10  
11 The more important issue however, is that BellSouth does not have  
12 any inherent advantage in building and operating a packet switching  
13 network over its competitors. Thus, in my opinion, the FCC rightly  
14 concluded that, except in the very limited circumstances mentioned in  
15 the rule, BellSouth has no obligation to unbundle its packet switching  
16 network for Cinergy and other CLECs.

17  
18 Q. WHAT IS YOUR UNDERSTANDING OF THE SYSTEM  
19 CAPABILITIES CINERGY CLAIMS TO NEED TO PROVIDE END-TO-  
20 END PACKET SWITCHING SERVICE TO ITS CUSTOMER?

21  
22 A. It is my understanding that Cinergy believes that the ideal unbundled  
23 packet switching element would function like BellSouth's ADSL  
24 product, which BellSouth markets to Internet service Providers  
25 ("ISPs"), and would combine the Network Interface Device ("NID"), the

1 high-frequency portion of the loop, the splitter, the DSLAM port, and  
2 LATA-wide ATM transport to provide end-to-end packet service to  
3 Cinergy's customer.  
4

5 Q. DOES CINERGY CURRENTLY HAVE ACCESS TO EACH OF THE  
6 ABOVE-STATED CAPABILITIES SO THAT IT CAN PROVIDE xDSL  
7 SERVICE TO ITS CUSTOMERS?  
8

9 A. Yes. Let me briefly describe the function for each of the items listed  
10 above. The NID provides a demarcation point between BellSouth's  
11 facilities (that is, the loop) and the customer's facilities (that is, the  
12 inside wire). Thus, the NID provides a way to connect the loop to the  
13 inside wire. In some cases, the NID provides additional functions such  
14 as lightning protection and loopback testing. The NID is already  
15 available to Cinergy and other CLECs on an unbundled basis at  
16 TELRIC based rates.  
17

18 Q. PLEASE DISCUSS THE AVAILABILITY OF LOOP DISTRIBUTION  
19 FACILITIES.  
20

21 A. Loop distribution facilities have been referred to as the "last mile"  
22 because these are the facilities that go the "last mile" to the customer's  
23 premises. The loop distribution cables are used to, in effect, "fan out"  
24 the cable pairs from the loop feeder cables. In this regard, the cables  
25 within a subdivision are generally the loop distribution cables.

1 Between the loop feeder cable and the loop distribution cable is a  
2 cabinet, above ground "hut," or below ground "controlled environment  
3 vault" ("CEV") within which cross-connections and/or electronics are  
4 located. Loop distribution facilities are already available to Cinergy  
5 and other CLECs on an unbundled basis at TELRIC based rates.  
6

7 Q. PLEASE DISCUSS THE HIGH-FREQUENCY PORTION OF THE  
8 LOOP.  
9

10 A. The high-frequency portion of the loop is used for data traffic when  
11 ADSL service is provided. A splitter separates the frequency used to  
12 provide the voice service from the frequency used to provide the data  
13 services. The high-frequency portion of the loop is already available to  
14 Cinergy and other CLECs on an unbundled basis at TELRIC based  
15 rates.  
16

17 Q. PLEASE DISCUSS THE AVAILABILITY OF THE DSLAM.  
18

19 A. The DSLAM performs two major functions. The first function of the  
20 DSLAM is to provide the "network end" DSL modem that  
21 communicates with the end user's DSL modem to provide the digital  
22 transmission path for that end user's data. In DSL terminology, this  
23 functionality is called the ADSL transceiver unit – central office end  
24 ("ATU-C") or HDSL transceiver unit-central office end ("HTU-C"). The  
25 term "transceiver" is used to describe a device that is both a

1 transmitter and a receiver. The second function is, as its name  
2 suggests, to multiplex the data streams from multiple end user lines  
3 into a single ATM pipe for transport to an ATM switch so that the  
4 various customer data streams can be routed to the appropriate  
5 destinations. In the opposite direction of transmission, the DSLAM  
6 selects the ATM cells coming from the ATM switch that are destined  
7 for a particular end user and routes (switches) those cells to the port  
8 associated with that user's line or ATU-x. BellSouth is not required by  
9 FCC rules to provide DSLAMs on an unbundled basis except in very  
10 limited circumstances, which at present do not exist in Tennessee.  
11 See *UNE Remand Order* at ¶ 313. Cinergy and other CLECs may  
12 provide their own DSLAMs and may collocate such in BellSouth's  
13 central offices and in BellSouth's remote terminals just as BellSouth  
14 does for itself.

15  
16 Q. PLEASE DISCUSS THE AVAILABILITY OF LOOP FEEDER.

17  
18 A. Loop feeder has been referred to as "the first mile" of the loop in that it  
19 is the first section of copper or fiber cable leaving the BellSouth central  
20 office headed towards a customer's premises. Loop feeder is already  
21 available to Cinergy and other CLECs on an unbundled basis at  
22 TELRIC based rates.

23  
24 Q. PLEASE DISCUSS THE AVAILABILITY OF ATM SWITCHING.

1 A. The ATM switch separates individual customers' data packets and  
2 determines the appropriate path forward to the correct destination.  
3 The ATM switch then places individual packets on these paths. This is  
4 necessary because different service providers employ different data  
5 backbone networks. The ATM switch separates the various data  
6 packets (based on packet header information) and sends the packets  
7 forward to the intended data network provider. Pursuant to the FCC's  
8 rules, BellSouth is not required to provide its unbundled packet  
9 switching to Cinergy and other CLECs on an unbundled basis except  
10 in limited circumstances as set forth in FCC Rule 51.319(c)(5). At  
11 present, such a situation does not exist in Tennessee. Nonetheless,  
12 ATM switches are readily available in the marketplace and Cinergy  
13 and other CLECs can and should self-provision ATM switching just as  
14 does BellSouth.

15  
16 Q. PLEASE SUMMARIZE ALL THE ELEMENTS CINERGY MIGHT  
17 NEED TO PROVIDE ITS xDSL SERVICE.

18  
19 A. All of the elements that Cinergy needs to provide its xDSL service are  
20 already available to Cinergy either as UNEs or as elements that  
21 Cinergy can and should provide for itself. Cinergy is in no way  
22 foreclosed from providing its xDSL service because BellSouth, in full  
23 compliance with FCC rules, does not provide unbundled DSLAMs and  
24 unbundled packet switching.

25

1 Q. ARE CLECs PRECLUDED FROM OFFERING DSL SERVICE  
2 WHERE DIGITAL LOOP CARRIER ("DLC") EQUIPMENT IS  
3 DEPLOYED?  
4

5 A. No. CLECs are not precluded from offering DSL service where DLC is  
6 deployed. When BellSouth provides its ADSL service where DLC is  
7 deployed, BellSouth must install DSLAM equipment at the DLC  
8 location. Through the collocation process offered by BellSouth, a  
9 CLEC that wants to provide DSL service where DLC is deployed also  
10 can collocate its DSLAM equipment at BellSouth's DLC remote  
11 terminal ("RT") sites. This allows the CLEC to provide the high speed  
12 data access in the same manner as does BellSouth. BellSouth will  
13 attempt in good faith to accommodate any CLEC requesting such  
14 collocation access at a BellSouth DLC RT site that contains a  
15 BellSouth DSLAM. In the unlikely event that BellSouth cannot  
16 accommodate collocation at a particular RT where a BellSouth DSLAM  
17 is located, BellSouth will unbundle the BellSouth packet switching  
18 functionality at that RT in accordance with FCC's requirements.  
19 BellSouth, therefore, provides CLECs the same opportunity to offer  
20 DSL service where DLC is deployed as BellSouth provides itself.  
21

22 Q. CINERGY APPARENTLY BELIEVES THAT THERE ARE NO VIABLE  
23 OPTIONS, INCLUDING SELF-PROVISIONING DSLAMs THAT EXIST  
24 TO PROVIDE HIGH-SPEED DATA SERVICES AND OTHER  
25 ADVANCED VOICE SERVICES. DOES BELL SOUTH OFFER UNEs



1        THAT WOULD ENABLE CLECS TO PROVIDE HIGH-SPEED DATA  
2        SERVICE TO CONSUMERS WHO ARE SERVED BY DLC LOOPS  
3        WHERE THE CLEC IS THE VOICE PROVIDER?  
4

5    A.    Yes. First, collocation of DSLAMs in BellSouth's central offices allows  
6        a CLEC such as Cinergy to provide its data services to those  
7        customers served entirely by copper loops (that is, customers who are  
8        not served by DLC). For those customers who are served by DLC,  
9        there are at least two ways CLECs can provide high-speed data  
10       service to those customers where the CLEC is the voice provider. One  
11       option would be for the CLEC to perform an electronic Loop Make-Up  
12       and locate an available copper loop from the demarcation point (end  
13       user's NID) all the way to the CLEC's collocation space in BellSouth's  
14       central office. Then, the CLEC would "reserve" the copper loop and  
15       issue an order for that copper loop and the customer's service would  
16       be moved from the DLC to the copper loop. Another option for CLECs  
17       would be to do what BellSouth does for itself. The CLEC could  
18       collocate its DSLAM at the BellSouth RT site. To transport the data  
19       from the end user to the RT site, the CLEC could either purchase the  
20       existing copper sub-loop from the demarcation point between the  
21       network and the end user and the RT or purchase an additional copper  
22       sub-loop, both of which BellSouth offers as UNEs. To transport the  
23       data from the RT site to the CLEC's collocation arrangement at  
24       BellSouth's central office, the CLEC could purchase unbundled sub-  
25       loop feeder. Various forms of unbundled sub-loop feeder are available

1       such as DS-1, DS-3, and OC-3. Therefore, once the CLEC collocates  
2       its DSLAM at the RT site, all of the capabilities needed to provide voice  
3       and data service to serve an end user that is served by BellSouth DLC  
4       facilities are available to the CLEC.

5  
6       Q.     IS CINERGY IMPAIRED IN ITS ABILITY TO PROVIDE DSL SERVICE  
7       TO END USERS SERVED BY DLC?

8  
9       A.     No. Cinergy has the same options available to it as BellSouth has for  
10      itself, as I previously explained. All of the necessary components are  
11      available through collocation and UNE offerings that allow Cinergy to  
12      serve end users, regardless of the facilities serving the end user.

13  
14      Q.     ARE CLECs IMPAIRED IN THEIR ABILITY TO COLLOCATE THEIR  
15      EQUIPMENT WITHIN BELL SOUTH'S RTs?

16  
17      A.     No. If sufficient space exists within a DLC RT, BellSouth will allow a  
18      CLEC to collocate its DSLAM in the RT, regardless of whether  
19      BellSouth has installed its own DSLAM at that RT. If sufficient space  
20      does not exist within the DLC and BellSouth has installed its own  
21      DSLAM at the DLC RT location, then BellSouth will make good-faith  
22      efforts to augment the space at that DLC RT, such that the CLEC can  
23      install its own DLSAM at that DLC RT. In the unlikely event that  
24      BellSouth could not accommodate collocation at the particular RT  
25      where BellSouth has a DSLAM, BellSouth will unbundle the BellSouth

1 packet switched network at that RT in accordance with FCC  
2 requirements. If sufficient space does not exist within the DLC RT and  
3 BellSouth has not installed its own DSLAM at that DLC RT location,  
4 then BellSouth will file a collocation waiver request with this Authority  
5 for that DLC RT site.

6  
7 BellSouth uses various types of structures such as cabinets, huts,  
8 controlled environment vaults ("CEVs"), etc. Huts and CEVs are  
9 usually air conditioned, however the cabinets are not. BellSouth uses  
10 "hardened" DSLAM equipment that can withstand extreme  
11 temperatures. Assuming Cinergy selects the appropriate equipment  
12 for a DLC environment, as does BellSouth, Cinergy should not  
13 experience any difficulties because the DSLAMs BellSouth uses for  
14 itself do not require unique power or air conditioning.

15  
16 Q. DO YOU AGREE WITH CINERGY'S CONTENTION THAT IF THE  
17 AUTHORITY DOES NOT REQUIRE UNBUNDLING OF  
18 BELL SOUTH'S DSLAM AND PACKET SWITCHING, THERE ARE NO  
19 OTHER ALTERNATIVES AVAILABLE TO CINERGY TO PROVIDE  
20 xDSL SERVICE TO CUSTOMERS?

21  
22 A. No. In addition to the RT collocation solution I previously mentioned,  
23 another alternative for Cinergy would be to enter into a Line Splitting  
24 agreement with another CLEC. Alternatively, Cinergy could pursue the  
25 use of an available copper loop such that service is provided from

1 Cinergy's DSLAM collocated in BellSouth's central office.

2

3 Q. IN A RECENT ARBITRATION IN KENTUCKY, CINERGY  
4 INTRODUCED A BUSINESS CASE THAT IT CONTENDED  
5 DEMONSTRATED THAT IT WAS COST PROHIBITIVE FOR  
6 CINERGY TO DEPLOY ITS OWN DSLAMs AND THAT IT WAS,  
7 THEREFORE, IMPAIRED IN ITS ABILITY TO PROVIDE  
8 BROADBAND SERVICE. DO YOU AGREE THAT THE COSTS FOR  
9 DSLAM EQUIPMENT USED IN CINERGY'S KENTUCKY BUSINESS  
10 CASE ANALYSIS ACCURATELY REFLECT THE COST THAT  
11 CINERGY WOULD HAVE TO PAY FOR DSLAM EQUIPMENT?

12

13 A. No. The costs that Cinergy assumed are significantly inflated. I  
14 requested list price information from DSLAM suppliers for DSLAM  
15 equipment that would be needed to serve 250 customers out of a  
16 given central office, which is the same assumption as was used by  
17 Cinergy in its business case. Attached to my testimony as Exhibit  
18 WKM-1 is a copy of correspondence from two suppliers providing the  
19 list prices for such equipment. I obtained price information for DSLAM  
20 equipment that transmits data in Ethernet protocol, as Cinergy  
21 assumed in its business case, and for DSLAM equipment that  
22 transmits data in ATM protocol as does BellSouth for itself. Although I  
23 find it curious that Cinergy advocates the unbundling of BellSouth's  
24 DSLAM equipment (which uses the ATM protocol) but assumes a  
25 different type of equipment (that is, the Net to Net Technologies

1 equipment operating in Ethernet protocol) for its business case, the  
2 fact is that the list price information I obtained is roughly equivalent for  
3 both types of DSLAM equipment, and is far less than the costs Cinergy  
4 assumed.

5  
6 Q. HOW DO THE LIST PRICES YOU ACQUIRED COMPARE TO THE  
7 PRICING INFORMATION THAT CINERGY USED IN ITS ANALYSIS?

8  
9 A. The list price quotes I received are significantly lower than the prices  
10 assumed by Cinergy. The first supplier, Copper Mountain Networks,  
11 produces DSLAM equipment that operates in Ethernet protocol. List  
12 price for a suitably equipped Copper Mountain DSLAM is \$74,935.  
13 The second supplier, Alcatel, produces DSLAMs that operate in ATM  
14 protocol. The list price for a suitably equipped Alcatel DSLAM is  
15 \$92,113. Both of these list prices are significantly lower than the  
16 DSLAM cost assumed by Cinergy of \$196,005.

17  
18 Q. DO YOU AGREE THAT THE PRICES THAT CINERGY USED IN ITS  
19 BUSINESS CASE FOR DSLAM LINE CARDS AND EQUIPMENT  
20 MANUFACTURED BY NET TO NET TECHNOLOGIES ARE  
21 APPROPRIATE?

22  
23 A. No. For its Kentucky business case, Cinergy assumed the use of  
24 DSLAM Line Cards each accommodating twelve (12) ports. Since it  
25 sought to equip a DSLAM at each location for 250 ports, Cinergy

1 assumed a need for 22 12-port cards, which includes one spare card,  
2 at a unit cost of \$7,995 and an extended cost of \$175, 890. Net to Net  
3 offers a 24-port DSLAM line card that fits the same DSLAM chassis  
4 that Cinergy assumed and the use of the 24-port DSLAM line card  
5 results in significantly less cost than the use of the older style 12-port  
6 DSLAM line cards. Further, the use of the 24-port DSLAM line cards  
7 would result in a requirement for only one DSLAM chassis rather than  
8 two as assumed in Cinergy's business case. This results in a savings  
9 of \$2,195 per site. The unit cost for the 24-port DSLAM line card is  
10 \$9,995 and the extended cost for DSLAM line cards sufficient for 250  
11 ports is \$109,945. Use of the newer, more efficient DSLAM line cards  
12 and associated equipment yields a savings of \$76,675 (that is  
13 \$196,005 for a Net to Net DSLAM with 12-port DSLAM line cards  
14 versus \$119,330 for a Net to Net DSLAM with 24-port DSLAM line  
15 cards) compared to the business case Cinergy presented in Kentucky.  
16 Exhibit WKM-2 contains pricing information I acquired for the new style  
17 Net to Net DSLAM 24-port line card and related equipment.

18  
19 Q. IS IT CRITICAL TO THE BUSINESS CASE RESULTS WHETHER  
20 ONE ASSUMES THE USE OF EQUIPMENT OPERATING UNDER  
21 ETHERNET PROTOCOL VERSUS ATM PROTOCOL?

22  
23 A. No. As I stated earlier, although there are some differences in  
24 equipment costs flowing from the decision as to whether to use  
25 Ethernet capable DSLAMs versus ATM capable DSLAMs, the

1 differences are relatively small (i.e., \$74,935 for the Copper Mountain  
2 Ethernet DSLAM versus \$92,113 for the Alcatel ATM DSLAM).

3  
4 Q. WHAT IS THE EFFECT ON THE "BOTTOM LINE" TO CINERGY'S  
5 BUSINESS CASE RESULTING FROM THE USE OF LOWER DSLAM  
6 EQUIPMENT COSTS?

7  
8 A. The effect is significant. Internal Rate of Return is the discount rate,  
9 which equates the present value of a project's expected cash inflows  
10 to the present value of the project's expected costs. Thus, Internal  
11 Rate of Return is the expected rate of return for the project. Using the  
12 DSLAM costs per the list price information set forth above and taking  
13 Cinergy's other cost inputs at face value, Cinergy's Internal Rate of  
14 Return would be 46.2% for the Copper Mountain Ethernet solution  
15 instead of the 7.2% generated using Cinergy's DSLAM cost figures.  
16 Likewise, for the Alcatel ATM solution, Cinergy's Internal Rate of  
17 Return would be 34.9% instead of 7.2%. Finally, the use of the new  
18 style Net to Net DSLAM line card results in significantly better financial  
19 valuations than Cinergy presented in Kentucky. Indeed, Cinergy's  
20 business plan yields an Internal Rate of Return of 25.5% instead of  
21 7.2% when currently available line cards and related equipment are  
22 substituted for the equipment Cinergy assumed. These figures correct  
23 the DSLAM cost information only, and do not correct the other  
24 erroneous assumptions in the business case Cinergy used in the  
25 Kentucky arbitration to attempt to produce a lower rate of return and

1           thus to prove impairment.

2

3           Exhibit WKM-3 attached to my testimony sets forth the information  
4           presented in Cinergy's analysis in Kentucky, with the only changes  
5           being the revised DSLAM cost information I obtained for the Copper  
6           Mountain Ethernet solution (Page 1 of Exhibit WKM-3), Alcatel ATM  
7           solution (Page 2 of Exhibit WKM-3) and Net to Net Ethernet solution  
8           (Page 3 of Exhibit WKM-3). Use of the cost figures I acquired  
9           positively influences the cash operating margin for Year 1 by \$121,070  
10          for the Copper Mountain Ethernet solution (the difference between  
11          Cinergy's assumption of \$196,005 and the cost information I acquired  
12          of \$74,935). Likewise, use of the cost figures I obtained for the Alcatel  
13          ATM solution improves cash operating margin for Year 1 by \$103,892  
14          (i.e., \$196,005 - \$92,113). Finally, use of the newer style Net to Net  
15          Ethernet solution 24-port DSLAM line cards positively influences cash  
16          operating margin for Year 1 by \$76,705 (i.e., \$196,005 - \$119,330).

17

18       Q.     WHAT OTHER FACTORS WOULD FURTHER IMPROVE THE  
19               CALCULATED FINANCIAL RESULTS?

20

21       A.     I used list price for the DSLAM equipment because I am unaware of  
22               what discount from list price the manufacturer actually extends to  
23               Cinergy. Thus, any discount that Cinergy actually receives would  
24               improve Cinergy's Cash Operating Margin on a dollar-for-dollar basis.  
25               Let me be clear, the prices I used to adjust Cinergy's business case



1 are manufacturers' list prices; they are not the prices BellSouth does or  
2 would pay for such equipment. BellSouth is often able to negotiate  
3 volume or other discounts, and I would expect Cinergy to likewise  
4 negotiate discounts with its supplier. However, I have not attributed  
5 any such discounts to the cost information set forth herein. To  
6 summarize, taking more accurate DSLAM cost information into  
7 consideration yields a markedly better view (and, in my opinion, a  
8 more representative view) of Cinergy's business plans.

9  
10 Q. WHAT IS BELL SOUTH'S RECOMMENDATION TO THIS  
11 AUTHORITY?

12  
13 A. Bellsouth recommends the Authority confirm that Cinergy does not  
14 meet the rules as set forth by the FCC in its *UNE Remand Order* that  
15 would require BellSouth to offer unbundled packet switching as a UNE.

16  
17 Q. HAS THIS AUTHORITY ADDRESSED THIS ISSUE IN PRIOR  
18 ARBITRATIONS?

19  
20 A. Yes, in its order issued June 25, 2001, in Docket No. 99-00948, the  
21 BellSouth-Intermedia Arbitration, the Authority found that BellSouth  
22 should be required to provide access to packet switching capabilities  
23 as a UNE only when the limited circumstances as set forth by the FCC  
24 exist.

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2

3 A. Yes.

BellSouth Telecommunications, Inc.  
Tennessee Regulatory Authority  
Docket No. 01-00987  
Exhibit WKM-1  
Page 1 of 4

**Copper Mountain Networks**

10145 Pacific Height Blvd  
Suite 100  
San Diego, CA 92024  
(858) 458-1800  
(858) 410-7283 Fax  
sales@coppermountain.com

Date: 05/14/02

**Copper Mountain Networks**

Price Quote: 05/14/02

Product Name and Description	Product Category	Part No	Unit Price	Quantity	Total List Price	Discent	Extended Price
CE200 Base System	Base	200-010-10	\$ 9,995	2	\$ 19,990		19,990.00
CE200 Software	Software	111-007-00	\$ -	2	\$ -		-
SDSL Line Card, 24 ports	Line Module	120-021-10	\$ 4,995	11	\$ 54,945		54,945.00
							\$ 74,935

The CopperEdge DSLAM is available with the following WAN interfaces:

Ethernet WAN Included  
DS3 ATM @ \$8,995  
DS3 FR @ \$8,995  
Quad T1 FR @ \$4,995  
V.35 (2 ports) @ \$2,995  
T1 IMA ATM @ \$10,495

**Terms**

Payment terms - Net 30 days on approved credit  
FCA Copper Mountain Networks, San Diego, CA, USA  
One year warranty hardware only, 30 days software only  
This price quotation is valid for 30 days from date of quotation

Copper Mountain Networks

Page 1

5/21/02

**DSLAM Costs**

264 ADSL Ports - CopperMountain

Qty	Description	Unit Price	Extended
2	CE200 Base System	\$ 9,995	\$ 19,990
2	CE200 Software	-	-
11	SDSL Line Card, 24 ports	4,995	54,945

<b>TOTAL</b>	<b>\$ 74,935</b>
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<b>Annual Maintenance (15%)</b>	<b>\$ 11,240</b>
---------------------------------	------------------

<b>Maintenance Ammortized Monthly ( /12)</b>	<b>937</b>
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HD CO DSLAM - HARDWARE CAPACITY FOR 432 LINES, EQUIPPED WITH LINE UNITS FOR 288 LINES					
MBOB MODEL: BBSWADSL20					
CONFIGURATION: HIGH DENSITY CO DSLAM WITH 1 RACK, 2 SHELVES					
Part Number	Description	MNEMONIC	Qty	LIST PRICE	EXTENDED PRICE
CO DSLAM-432: MBOB Model BBSWADSL20					
3EC16911AC	Configured Equipment Rack 2 Shelf - 7'	HLTR-A	1	\$ 18,515	\$ 18,515
3EC16868AA	Extender Cable, Short		2	\$ 130	\$ 260
3EC16881AA	DS3 NT	D3NT-A	2	\$ 5,807	\$ 11,614
3EC16883AA	DS3 I/O Module	HD3H-A	1	\$ 109	\$ 109
3EC16887AA	Alarm Control Unit	AACU-C	1	\$ 981	\$ 981
3EC16435AA	Extender Unit	ADSE-B	2	\$ 2,464	\$ 4,928
3EC16888AA	Continuity Test Unit	HCTU-A	1	\$ 245	\$ 245
3EC16528AA	ADSL Line Termination Unit (12 lines per card)	ADLT-J	21	\$ 2,148	\$ 45,108
3EC16883AB	Low Pass Filter CO (12 lines per card)	HLPC-B	21	\$ 493	\$ 10,353
Unit Total:			1		\$ 92,113

### DSLAM Costs

252 ADSL Ports - Alcatel

Qty	Description	Unit Price	Extended
1	Configured Equipment Rack 2 Shelf - 7'	\$ 18,515	\$ 18,515
2	Extender Cable, Short	\$ 130	\$ 280
			\$ -
2	DS3 NT	\$ 5,807	\$ 11,614
1	DS3 I/O Module	\$ 109	\$ 109
1	Alarm Control Unit	\$ 981	\$ 981
2	Extender Unit	\$ 2,484	\$ 4,928
1	Continuity Test Unit	\$ 245	\$ 245
			\$ -
21	ADSL Line Termination Unit (12 lines per card)	\$ 2,148	\$ 45,108
21	Low Pass Filter CO (12 lines per card)	\$ 493	\$ 10,353

<b>TOTAL</b>	<b>\$ 92,113</b>
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<b>Annual Maintenance (15%)</b>	<b>\$ 13,817</b>
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<b>Maintenance Ammortized Monthly (/12)</b>	<b>1,151</b>
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Date: 05/21/02

**Price Quote: 05/21/02**[illegible]

**Cinergy Communications Company ADSL Business Plan**  
**BellSouth Recommended Plan**

BellSouth Telecommunications, Inc.  
Dkt. No. 01-00987  
Exhibit WKM-3  
Page 1 of 3

Number of Months for Rampup  
Level of Risk  
CCC Monthly Service Fee

24  
79.95

**Year by Year Summary**

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Total
New Loops - Annual	132	118	0	0	0	250
Total Loops - To-Date	132	250	250	250	250	
Average annual loop months	2.02	3.02	3.75	3.75	3.75	

**Cash Inflows**

NRC Revenue	\$ 13,200	\$ 11,800	\$ -	\$ -	\$ -	\$ 25,000
MRC Business Revenue	\$ 34,538	\$ 97,139	\$ 119,925	\$ 119,925	\$ 119,925	\$ 491,452
MRC Residential Revenue	\$ 21,279	\$ 80,440	\$ 74,925	\$ 74,925	\$ 74,925	\$ 308,494
<b>Total Cash Inflows</b>	<b>\$ 69,017</b>	<b>\$ 189,379</b>	<b>\$ 194,850</b>	<b>\$ 194,850</b>	<b>\$ 194,850</b>	<b>\$ 822,946</b>

**Cash Outflows**

**Direct Costs**

**Start-up Costs**

Collocation Buildout (PHR-5)	\$ 12,589	\$ -	\$ -	\$ -	\$ -	\$ 12,589
Collocation DSLAMs (PHR-6)	\$ 74,935	\$ -	\$ -	\$ -	\$ -	\$ 74,935
DS3 Interoffice Transport Install (PHR-8)	\$ 671	\$ -	\$ -	\$ -	\$ -	\$ 671
Line Sharing Splitter Capacity	\$ 1,137	\$ -	\$ -	\$ -	\$ -	\$ 1,137

**NRC:**

Collocation 2-Wire Cross Connects (1st)	\$ 531	\$ 487	\$ -	\$ -	\$ -	\$ 1,018
Collocation 2-Wire Cross Connects (addtl)	\$ 5,308	\$ 4,733	\$ -	\$ -	\$ -	\$ 10,040
Line Share Splitter Activation UNE	\$ 2,809	\$ 2,511	\$ -	\$ -	\$ -	\$ 5,320

**MRC:**

Collocation Operations	\$ 11,128	\$ 11,128	\$ 11,128	\$ 11,128	\$ 11,128	\$ 55,640
Collocation DSLAM Maintenance (PHR-6)	\$ 11,240	\$ 11,240	\$ 11,240	\$ 11,240	\$ 11,240	\$ 56,201
Collocation 2-Wire Cross Connects (PHR-6)	\$ 266	\$ 752	\$ 930	\$ 930	\$ 930	\$ 3,808
DS3 Interoffice Transport (Blackhaul)	\$ 31,782	\$ 31,782	\$ 31,782	\$ 31,782	\$ 31,782	\$ 158,910
Internet Service Bus (Bandwidth & Email) (PHR-9)	\$ 3,456	\$ 9,720	\$ 12,000	\$ 12,000	\$ 12,000	\$ 49,176
Internet Service Resi (Bandwidth & Email) (PHR-9)	\$ 1,944	\$ 5,468	\$ 6,750	\$ 6,750	\$ 6,750	\$ 27,662
Line Sharing Splitter UNE Monthly (96 lines)	\$ 7,158	\$ 7,158	\$ 7,158	\$ 7,158	\$ 7,158	\$ 35,789
Line Share Splitter Activation (PHR-7)	\$ 6,375	\$ 18,018	\$ 22,290	\$ 22,290	\$ 22,290	\$ 91,263

**Total Direct Costs**

	\$ 171,328	\$ 102,997	\$ 103,278	\$ 103,278	\$ 103,278	\$ 584,159
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**Cash Gross Margin \$**

	\$ (102,311)	\$ 86,382	\$ 91,572	\$ 91,572	\$ 91,572	\$ 238,787
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**Sales Costs**

SPIF (One-time Commission on Sale)	\$ 5,277	\$ 4,717	\$ -	\$ -	\$ -	\$ 9,994
Marketing Costs (Based on Resi MRC)	\$ 6,593	\$ 5,894	\$ -	\$ -	\$ -	\$ 12,487
Residual (3% Business MRC Revenue)	\$ 1,036	\$ 2,914	\$ 3,598	\$ 3,598	\$ 3,598	\$ 14,744
<b>Total Sales Cost</b>	<b>\$ 12,906</b>	<b>\$ 13,525</b>	<b>\$ 3,598</b>	<b>\$ 3,598</b>	<b>\$ 3,598</b>	<b>\$ 37,225</b>

**Cash Contribution Margin**

	\$ (115,217)	\$ 52,857	\$ 87,974	\$ 87,974	\$ 87,974	\$ 201,582
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**Operating Costs**

Provision, Pro. Mngt, Cust Serv, Etc.	\$ 3,960	\$ 3,540	\$ -	\$ -	\$ -	\$ 7,500
Provision, Pro. Mngt, Cust Serv, Etc.	\$ 1,980	\$ 1,770	\$ -	\$ -	\$ -	\$ 3,750
<b>Total Operating Costs</b>	<b>\$ 5,940</b>	<b>\$ 5,310</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,250</b>

**Cash Operating Margin**

	\$ (121,157)	\$ 47,547	\$ 87,974	\$ 87,974	\$ 87,974	\$ 190,312
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**Total Cash Outflow**

	\$ 190,174	\$ 121,832	\$ 106,876	\$ 106,876	\$ 106,876	\$ 632,634
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**Net Cash Flow - Annual**

	\$ (121,157)	\$ 47,547	\$ 87,974	\$ 87,974	\$ 87,974	\$ 190,312
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**Net Cash Flow - To-Date**

	\$ (121,157)	\$ (73,610)	\$ 14,364	\$ 102,338	\$ 190,312	
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**Validation Results**

Internal Rate of Return (IRR)	46.2%
Months to Payback on Investment	(46)
<b>Total Startup Costs</b>	<b>\$ 89,332</b>



Cinergy Communications Company ADSL Business Plan  
BellSouth Recommended Plan Using TELRIC Rates

Number of Months for Rampup	24					
Level of Risk	79.95					
CCC Monthly Service Fee						
Year by Year Summary						
	Yr.1	Yr.2	Yr.3	Yr.4	Yr.5	Total
New Loops - Annual	132	118	0	0	0	250
Total Loops - To-Date	132	250	250	250	250	
Average annual loop months	2.02	3.02	3.75	3.75	3.75	
Cash Inflows						
NRC Revenue	\$ 13,200	\$ 11,800	\$ -	\$ -	\$ -	\$ 25,000
MRC Business Revenue	\$ 34,538	\$ 97,139	\$ 119,925	\$ 119,925	\$ 119,925	\$ 491,452
MRC Residential Revenue	\$ 21,279	\$ 80,440	\$ 74,925	\$ 74,925	\$ 74,925	\$ 306,494
Total Cash Inflows	\$ 69,017	\$ 189,379	\$ 194,850	\$ 194,850	\$ 194,850	\$ 822,948
Cash Outflows						
Direct Costs:						
Start-up Costs						
Collocation Buildout (PHR-5)	\$ 12,589	\$ -	\$ -	\$ -	\$ -	\$ 12,589
Collocation DSLAMs (PHR-6)	\$ 92,113	\$ -	\$ -	\$ -	\$ -	\$ 92,113
DS3 Interoffice Transport Install (PHR-8)	\$ 671	\$ -	\$ -	\$ -	\$ -	\$ 671
Line Sharing Splitter Capacity	\$ 1,137	\$ -	\$ -	\$ -	\$ -	\$ 1,137
NRC:						
Collocation 2-Wire Cross Connects (1st)	\$ 531	\$ 467	\$ -	\$ -	\$ -	\$ 1,018
Collocation 2-Wire Cross Connects (addtl)	\$ 5,308	\$ 4,733	\$ -	\$ -	\$ -	\$ 10,040
Line Share Splitter Activation (PHR-7)	\$ 2,809	\$ 2,611	\$ -	\$ -	\$ -	\$ 5,320
MRC:						
Collocation Operations	\$ 11,128	\$ 11,128	\$ 11,128	\$ 11,128	\$ 11,128	\$ 55,640
Collocation DSLAM Maintenance (PHR-6)	\$ 13,817	\$ 13,817	\$ 13,817	\$ 13,817	\$ 13,817	\$ 69,085
Collocation 2-Wire Cross Connects (PHR-8)	\$ 266	\$ 752	\$ 930	\$ 930	\$ 930	\$ 3,808
DS3 Interoffice Transport (Blackhaul)	\$ 31,782	\$ 31,782	\$ 31,782	\$ 31,782	\$ 31,782	\$ 158,910
Internet Service Bus (Bandwidth & Email) (PHR-9)	\$ 3,456	\$ 9,720	\$ 12,000	\$ 12,000	\$ 12,000	\$ 49,176
Internet Service Resel (Bandwidth & Email) (PHR-9)	\$ 1,944	\$ 5,468	\$ 6,750	\$ 6,750	\$ 6,750	\$ 27,662
Line Sharing Splitter Capacity	\$ 7,158	\$ 7,158	\$ 7,158	\$ 7,158	\$ 7,158	\$ 35,789
Line Share Splitter Activation (PHR-7)	\$ 6,375	\$ 18,018	\$ 22,290	\$ 22,290	\$ 22,290	\$ 91,263
Total Direct Costs	\$ 191,083	\$ 105,573	\$ 105,855	\$ 105,855	\$ 105,855	\$ 614,220
Cash Gross Margin \$	\$ (122,066)	\$ 63,806	\$ 88,995	\$ 88,995	\$ 88,995	\$ 208,726
Sales Costs						
SPIF (One-time Commission on Sale)	\$ 5,277	\$ 4,717	\$ -	\$ -	\$ -	\$ 9,994
Marketing Costs (Based on Resel MRC)	\$ 8,593	\$ 5,894	\$ -	\$ -	\$ -	\$ 12,487
Residual (3% Business MRC Revenue)	\$ 1,036	\$ 2,814	\$ 3,598	\$ 3,598	\$ 3,598	\$ 14,744
Total Sales Cost	\$ 12,906	\$ 13,425	\$ 3,598	\$ 3,598	\$ 3,598	\$ 37,225
Cash Contribution Margin	\$ (134,972)	\$ 50,281	\$ 85,397	\$ 85,397	\$ 85,397	\$ 171,501
Operating Costs						
Provision, Proj Mngt, Cust Serv, Etc	\$ 3,980	\$ 3,540	\$ -	\$ -	\$ -	\$ 7,500
Provision, Proj Mngt, Cust Serv, Etc	\$ 1,950	\$ 1,770	\$ -	\$ -	\$ -	\$ 3,750
Total Operating Costs	\$ 5,940	\$ 5,310	\$ -	\$ -	\$ -	\$ 11,250
Cash Operating Margin	\$ (140,912)	\$ 44,971	\$ 85,397	\$ 85,397	\$ 85,397	\$ 160,251
Total Cash Outflow	\$ 209,829	\$ 124,408	\$ 109,453	\$ 109,453	\$ 109,453	\$ 662,985
Net Cash Flow - Annual	\$ (140,912)	\$ 44,971	\$ 85,397	\$ 85,397	\$ 85,397	\$ 160,251
Net Cash Flow - To-Date	\$ (140,912)	\$ (95,941)	\$ (10,544)	\$ 74,853	\$ 160,251	
Validation Results						
Internal Rate of Return (IRR)	34.9%					
Months to Payback on Investment	(48)					
Total Startup Costs	\$ 106,519					

Cinergy Communications Company ADSL Business Plan  
BellSouth Recommended Plan Using TELRIC Rates

Number of Months for Rampup 24  
Level of Risk

Year by Year Summary

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Total
New Loops - Annual	132	118	0	0	0	250
Total Loops - To-Date	132	250	250	250	250	

Cash Inflows

NRC Revenue	\$ 13,200	\$ 11,800	\$ -	\$ -	\$ -	\$ 25,000
MRC Business Revenue	\$ 34,538	\$ 97,139	\$ 119,925	\$ 119,925	\$ 119,925	\$ 491,452
MRC Residential Revenue	\$ 21,279	\$ 60,440	\$ 74,925	\$ 74,925	\$ 74,925	\$ 306,494
<b>Total Cash Inflows</b>	<b>\$ 69,017</b>	<b>\$ 169,379</b>	<b>\$ 194,850</b>	<b>\$ 194,850</b>	<b>\$ 194,850</b>	<b>\$ 822,946</b>

Cash Outflows

Direct Costs:

Start-up Costs

Collocation Buildout (PHR-5)	\$ 12,589	\$ -	\$ -	\$ -	\$ -	\$ 12,589
Collocation DSLAMs (PHR-6)	\$ 119,330	\$ -	\$ -	\$ -	\$ -	\$ 119,330
DS3 Interoffice Transport Install (PHR-8)	\$ 671	\$ -	\$ -	\$ -	\$ -	\$ 671
Line Sharing Splitter Capacity	\$ 1,137	\$ -	\$ -	\$ -	\$ -	\$ 1,137

NRC:

Collocation 2-Wire Cross Connects (1st)	\$ 531	\$ 487	\$ -	\$ -	\$ -	\$ 1,018
Collocation 2-Wire Cross Connects (addtl)	\$ 5,308	\$ 4,733	\$ -	\$ -	\$ -	\$ 10,040
Line Share Splitter Activation (PHR-7)	\$ 2,809	\$ 2,511	\$ -	\$ -	\$ -	\$ 5,320

MRC:

Collocation Operations	\$ 11,128	\$ 11,128	\$ 11,128	\$ 11,128	\$ 11,128	\$ 55,640
Collocation DSLAM Maintenance (PHR-6)	\$ -	\$ 19,467	\$ 19,467	\$ 19,467	\$ 19,467	\$ 77,868
Collocation 2-Wire Cross Connects (PHR-6)	\$ 266	\$ 752	\$ 930	\$ 930	\$ 930	\$ 3,808
DS3 Interoffice Transport (Blackhaul)	\$ 31,782	\$ 31,782	\$ 31,782	\$ 31,782	\$ 31,782	\$ 158,910
Internet Service Bus (Bandwidth & Email) (PHR-9)	\$ 3,456	\$ 9,720	\$ 12,000	\$ 12,000	\$ 12,000	\$ 49,176
Internet Service Resi (Bandwidth & Email) (PHR-9)	\$ 1,944	\$ 5,468	\$ 6,750	\$ 6,750	\$ 6,750	\$ 27,662
Line Sharing Splitter Capacity	\$ 7,158	\$ 7,158	\$ 7,158	\$ 7,158	\$ 7,158	\$ 35,789
Line Share Splitter Activation (PHR-7)	\$ 6,375	\$ 18,018	\$ 22,290	\$ 22,290	\$ 22,290	\$ 91,263

Total Direct Costs

\$ 204,483	\$ 111,223	\$ 111,505	\$ 111,505	\$ 111,505	\$ 111,505	\$ 650,221
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Cash Gross Margin \$

\$ (135,466)	\$ 58,156	\$ 83,345	\$ 83,345	\$ 83,345	\$ 83,345	\$ 172,725
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Sales Costs

SPIF (One-time Commission on Sale)	\$ 5,277	\$ 4,717	\$ -	\$ -	\$ -	\$ 9,994
Marketing Costs (Based on Resi MRC)	\$ 6,593	\$ 5,894				\$ 12,487
Residual (3% Business MRC Revenue)	\$ 1,036	\$ 2,914	\$ 3,598	\$ 3,598	\$ 3,598	\$ 14,744
<b>Total Sales Cost</b>	<b>\$ 12,906</b>	<b>\$ 13,525</b>	<b>\$ 3,598</b>	<b>\$ 3,598</b>	<b>\$ 3,598</b>	<b>\$ 37,225</b>

Cash Contribution Margin

\$ (148,372)	\$ 44,831	\$ 79,747	\$ 79,747	\$ 79,747	\$ 79,747	\$ 135,500
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Operating Costs

Provision, Proj Mngt, Cust Serv, Etc.	\$ 3,960	\$ 3,540	\$ -	\$ -	\$ -	\$ 7,500
Provision, Proj Mngt, Cust Serv, Etc.	\$ 1,980	\$ 1,770	\$ -	\$ -	\$ -	\$ 3,750
<b>Total Operating Costs</b>	<b>\$ 5,940</b>	<b>\$ 5,310</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,250</b>

Cash Operating Margin

\$ (154,312)	\$ 39,321	\$ 79,747	\$ 79,747	\$ 79,747	\$ 79,747	\$ 124,250
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Total Cash Outflow

\$ 223,329	\$ 130,058	\$ 115,103	\$ 115,103	\$ 115,103	\$ 115,103	\$ 698,696
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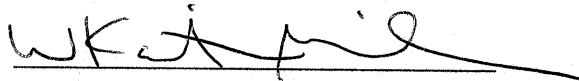
<b>Net Cash Flow - Annual</b>	<b>\$ (154,312)</b>	<b>\$ 39,321</b>	<b>\$ 79,747</b>	<b>\$ 79,747</b>	<b>\$ 79,747</b>	<b>\$ 124,250</b>
<b>Net Cash Flow - To-Date</b>	<b>\$ (154,312)</b>	<b>\$ (114,991)</b>	<b>\$ (35,244)</b>	<b>\$ 44,503</b>	<b>\$ 124,250</b>	
<b>Valuation Results</b>						
Internal Rate of Return (IRR)	25.5%					
Months to Payback on Investment	(51)					
Total Startup Costs	\$ 133,727					

AFFIDAVIT

STATE OF: Georgia  
COUNTY OF: Fulton

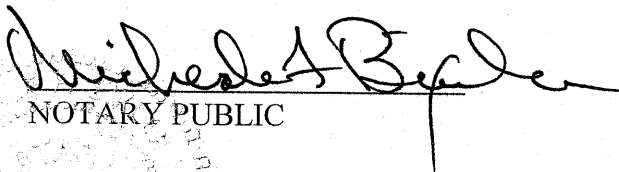
BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared W. Keith Milner –Assistant Vice President – Interconnection, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 01-00987 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 22 pages and 3 exhibit(s).



W. Keith Milner

Sworn to and subscribed  
before me on June 10, 2002



NOTARY PUBLIC

**MICHEALE F. BIXLER**  
Notary Public, Douglas County, Georgia  
My Commission Expires November 3, 2005

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BELLSOUTH TELECOMMUNICATIONS, INC.  
TESTIMONY OF THOMAS G. WILLIAMS  
BEFORE THE TENNESSEE REGULATORY AUTHORITY  
DOCKET NO. 01-00987  
JUNE 10, 2002

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH  
TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS  
ADDRESS.

A. My name is Thomas G. Williams. I am employed by BellSouth as Product  
Manager for Line Sharing and Line Splitting for the nine-state BellSouth  
region. My business address is 3535 Colonnade Parkway, Suite E511,  
Birmingham, Alabama, 35242.

Q. WHAT IS YOUR PROFESSIONAL EXPERIENCE AND  
EDUCATIONAL BACKGROUND?

A. My career at BellSouth spans over 14 years and includes positions in  
various product management positions. I also have seventeen years  
service with AT&T and Southern Bell, during which I held various positions  
in sales, marketing, and operations. I have a bachelor's degree in  
Marketing.

Q. HAVE YOU TESTIFIED PREVIOUSLY?

1

2 A. Yes. I previously testified on Line Sharing issues before the Alabama,  
3 Florida, Georgia, Kentucky, Louisiana and Mississippi Public Service  
4 Commissions, the North Carolina Utilities Commission and the Public  
5 Service Commission of South Carolina. I also filed an affidavit with the  
6 FCC.

7

8 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

9

10 A. My testimony addresses ISSUE 12 - Line Splitting.

11

12 ***Issue 12: Should BellSouth be required to offer Line Splitting – access to***  
13 ***the High Frequency Portion of the Loop (“HFPL”) – when Cinergy***  
14 ***Communications purchases UNE-P loops from BellSouth to provide***  
15 ***local service?***

16

17 Q. WHAT IS YOUR UNDERSTANDING OF THIS ISSUE?

18

19 A. BellSouth has previously made it very clear to Cinergy that BellSouth will  
20 provide Cinergy, or any other DLEC, with Line Splitting at the rate for a  
21 UNE port, a UNE loop, plus the costs of the necessary (one or two) cross-  
22 connections. Additionally, BellSouth provides CLECs a BellSouth owned  
23 splitter option. Accordingly, it appears that this should no longer be  
24 considered an Issue in this Arbitration.

25

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2

3 A. Yes.

AFFIDAVIT

STATE OF: Alabama  
COUNTY OF: Jefferson

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Thomas G. Williams –Product Manager- Line Sharing, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 01-00987 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 3 pages and 0 exhibit(s).

Thomas G. Williams

Thomas G. Williams

Sworn to and subscribed  
before me on June 17 2002

Micheale F. Bixler  
NOTARY PUBLIC

MICHEALE F. BIXLER  
Notary Public, Douglas County, Georgia  
My Commission Expires November 3, 2005